Hi-Dep(R)

GROUP 4 HERBICIDE

BROADLEAF HERBICIDE Gordon's(R) Agricultural Products

Contains 2,4-D

COMMERCIAL

READ THE LABEL AND ATTACHED BOOKLET BEFORE USING

REGISTRATION NO. 24669 PEST CONTROL PRODUCTS ACT

GUARANTEE: 2,4-D 460\* g/L (present as amine)\* Isomer specific analysis

WARNING



**POISON** 

DANGER: EYE IRRITANT

10 L

PBI/Gordon Corporation 1217 West 12th Street Kansas City, Missouri 64101-1407

DIRECTIONS: HI-DEP consists of the dimethylamine and diethanolamine salts of 2.4 D.

PRECAUTION: KEEP OUT OF REACH OF CHILDREN. KEEP FROM FREEZING DANGER: Corrosive, causes eye damage and skin irritation. Avoid contact with eyes skin and clothing. Harmful if swallowed, absorbed through skin or inhaled. Avoid breathing spray mist. Avoid spray drift.

If this pest control product is to be used on a commodity that may be exported to the U. S. and you require information on acceptable residue levels in the U. S. contact 1 866 375-4648 or www.cropro.org/

FIRST AID: IF SWALLOWED: Do not induce vomiting. Drink promptly a large quantity of milk, egg white, gelatin solution, or if these are not available, large quantities of water. Avoid alcohol. Get medical attention, call poison control centre IMMEDIATELY or rush to the nearest hospital. Take a copy of label. Never give anything by mouth to an unconscious person.

IF ON SKIN: Remove contaminated clothing and wash skin thoroughly with soap and water. If irritation develops, get medical attention.

IF IN EYES: Immediately flush eyes with plenty of water for 15 minutes. Get medical attention or call a poison control centre IMMEDIATELY.

IF INHALED: Remove victim to fresh air and apply respiration if required. Get medical attention or call a poison control centre IMMEDIATELY.

Take container, label or product name and Pest Control Product Registration Number with you, when seeking medical attention.

TOXICOLOGICAL INFORMATION: Probable mucosal damage may contraindicate the use of gastric lavage. Treat symptomatically.

#### PROTECTIVE CLOTHING AND EQUIPMENT:

Handling the concentrate (mixing or loading): wear longsleeved shirt, long pants, chemical resistant gloves, socks and shoes, and protective eye wear (face shield or safety

glasses). Rinse gloves before removal. Coveralls or a chemical-resistant apron should also be worn when open pouring from containers greater than 5 L.

Handling the dilute solution (during application or repairing or cleaning equipment): wear a long-sleeved shirt, long pants, chemical resistant gloves, socks and shoes. Rinse gloves before removal. Gloves are not required during application when applicator is in an enclosed tractor or in an enclosed airplane cockpit.

#### OPERATOR USE PRECAUTIONS

- Wear freshly laundered clothing and clean protective equipment daily.
- Rinse gloves before removal.
- Wash hands before eating, drinking, using tobacco products or using the toilet. If herbicides penetrates clothing remove immediately; then wash thoroughly and put
- on clean clothing. Throw away clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate.
- After using this product, remove clothing and launder separately and promptly, and thoroughly wash hands and exposed skin with soap and water. Follow manufacturer's
- instructions for cleaning personal protective clothing and equipment. If no such instructions for washables are provided, use detergent and hot water. Keep and wash
- personal protective equipment separate from household laundry.
- After work remove all clothing and shower using soap and water.
- STORAGE: Store in original container tightly closed away from seeds, fertilizers, plants and food stuffs. Store at temperatures above 0'C. If subjected to freezing temperatures,
- warm to at least 5'C and mix thoroughly. Insecticides and fungicides should be segregated from herbicides so as to prevent the possibility of cross-contamination.

#### SHAKE WELL BEFORE USING.

#### DISPOSAL:

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

- 1. Triple-or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
- 2. Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for information on the clean-up of spills.

# IN CASE OF SPILLS, POISONING OR FIRE, TELEPHONE EMERGENCY RESPONSE NUMBER 1 800 821-7925 TOLL FREE

NOTICE TO USER: This control product is to be used only in accordance with the directions on this label. It is an offense under the PEST CONTROL PRODUCTS ACT to use a control product under unsafe conditions

NOTICE TO BUYER: Seller's guarantee shall be limited to the terms set on the label and subject thereto, the buyer assumes the risk to persons or property arising from the use or handling of this product and accepts the product on that condition.

HI-DEP(R) is a registered trademark of PBI/Gordon Corporation. (( PAMPHLET ))

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Follow manufacturer's instructions for cleaning personal protective clothing and equipment. If no

such instructions for washables are provided, use detergent and hot water.

Keep and wash personal protective equipment separate from household laundry.

- After work remove all clothing and shower using soap and water.

STORAGE: Store in original container tightly closed away from seeds, fertilizers, plants and food stuffs. Store at temperatures above 0'C. If subjected to freezing temperatures,

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#### DIRECTIONS FOR USE

# RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, Hi-Dep(R) is a Group 4 herbicide. Any weed population may contain or develop plants naturally resistant to Hi-Dep(R) and other Group 4 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay herbicide resistance:

- Where possible, rotate the use of Hi-Dep(R) or other Group 4 herbicides with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group when such use is permitted.

- Herbicide use should be based on an IPM program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical), cultural, biological and other chemical control practices.
- Monitor treated weed populations for resistance development.
- Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment and planting clean seed.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or integrated weed-management recommendations for specific crops and weed biotypes.
- For further information or to report suspected resistance, contact Pbi Gordon. at 1 800 821-7925 or at www.pbigordon.com

# **USE PRECAUTIONS**

Avoid spray drift to any desirable vegetation NOT listed on this label as damage may occur. Under no circumstances should this herbicide product or any 2,4-D weed killer be used in the vicinity of tomatoes, garden crops, grapes, ornamentals or any other susceptible crops, or severe damage may result. Avoid contamination of ponds, streams, rivers, and other water sources. Do not spray during periods of high winds when spray

drift is likely to occur. Coarse sprays are less likely to drift. Do not spray during periods of high temperatures when crops are under stress as damage to crop may occur. Do not use this product through any type of irrigation system. Avoid contamination of water

supplies that may be used to irrigate or water susceptible crops, or to be used for domestic purposes. This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and non-target plants. Do not apply directly to water except as specified on this label. Do not contaminate water when disposing of equipment washwaters.

Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D have been associated with mixing/loading and disposal sites. Caution should be used when handling 2,4-D pesticides at such sites to prevent contamination of groundwater supplies. Use of closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading

equipment on an impervious pad to contain spills will help prevent groundwater contamination. Do not mix or pour Hi- Dep in areas near wells or other water sources.

#### TIMING

For best results spray when WEEDS ARE YOUNG AND ACTIVELY GROWING. Apply in good growing conditions. Application must be made before the crop canopy shields the weeds.

#### SPRAYER

Clean all spray equipment thoroughly before use. Select nozzle tips to apply the recommended volume per hectare. Higher water volumes will reduce the risk of crop injury. Calibrate the sprayer and adjust the boom height to ensure uniform coverage.

Nozzles must be in good condition and spraying the same volume. Flat fan nozzle tips are recommended.

#### CLEANING OF SPRAYER

Thoroughly clean the herbicide sprayer before applying any other chemical on crops which may be damaged (see USE PRECAUTIONS). Wash the outside of the sprayer and drain the tank completely. Remove and clean filters, screens, and nozzle tips separately. Fill the sprayer tank with clean water. With the agitator running flush out the line and boom, then drain. Fill the sprayer with clean water, and for each 100 L add 1 L household ammonia. Operate the pump and agitator for 15 minutes. If possible, let the solution remain in the tank and hoses overnight; recirculate and flush out the lines and boom,

then drain. Rinse out twice with clean water, recirculating and draining each time. DO NOT contaminate irrigation or drinking water when cleaning the sprayer.

#### MIXING

Shake this product well before using. Half fill the spray tank with clean water. Add the required amount of product and agitate thoroughly. Fill the tank with clean water and agitate well before use. NOTE: If spray solution has been left standing, agitate thoroughly before use.

TRANSFER SYSTEM: Containers larger than 20 litres: Use a transfer system that avoids open pouring when transferring the liquid concentrate from such containers into the spray tank.

#### **AERIAL APPLICATION**

USE PRECAUTIONS FOR AERIAL APPLICATION (to cereal crops, pasture, rangeland, stubble and non-crop land)

- Avoid direct application to any body of water. Do not contaminate water through spray drift or by cleaning of equipment or disposal of wastes.
- Use a minimum of 30 L of water per hectare. Use boom pressure of 170 kPa or less.
- Avoid placing nozzles where spray will enter wing tip vortices.
- Do not apply this product directly to, or otherwise permit it to come into direct contact with desirable crops or other desirable broadleaf plants or non-target species and do not permit spray mists to drift onto them.
- Coarse sprays are less likely to drift, use only nozzles or nozzle configuration which minimize the production of fine spray drops. Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure. When spraying, avoid combination of pressure and nozzle type that will result in fine particles (mist) which are more likely to drift. A spray thickening agent or drift retardant may be used with this product to aid in reducing spray drift.
- Do not use human flaggers.
- Avoid Spray Drift: Apply only when there is little or no hazard from spray drift. Small quantities of the spray, which may not be visible, may seriously injure susceptible crops and damage sensitive non-target habitat. A method must be used to detect air movement, lapse conditions, or temperature inversions (stable air) such as the use of balloons or a continuous smoke column at or near the spray site or a smoke generator on the spray equipment. If the smoke develops into layers or indicates a potential for hazardous spray drift, do not spray.
- Buffer Zones: Appropriate buffer zones should be established between treatment areas and aquatic systems, and treatment areas and significant wildlife habitat.

AIRCRAFT SPECIFICATIONS (FIXED WING OF ROTARY WING): Boom width should not exceed 3/4 the length of the aircraft wingspan. Do not exceed 170 kPa (25 psi) nozzle pressure. Number of nozzles should be positioned between 135 degrees and 175 degrees from direction of flight for fixed wing. DO NOT APPLY THROUGH BECO-MIST NOZZLE SYSTEMS. Maintain aircraft altitude of 3-3.75 metres (10 to 12 feet) during application.

GROUND APPLICATION: Apply in water, 50 to 100 litres total solution per hectare with conventional equipment. Use nozzle systems capable of spraying correct volumes with boom pressures of 160 kPa (25 psi) or less.

#### LIST OF WEEDS CONTROLLED

Susceptible weeds: Cocklebur, Kochia (2-4 leaf), Lambsquarters, Mustards, Prickly lettuce, Ragweed, Russian Pigweed, Sheperds' purse (fall rosette and spring seedling),

Stinkweed (fall rosette and spring seedling). Flixweed and Narrow-leafed Hawksbeard are susceptible in the fall and at the 1-2 leaf stage in the spring.

Harder to kill weeds: Bluebur, Blue lettuce\*, Canada thistle\*, Common peppergrass, Curled dock\*, Dandelions\*, Dog Mustard\*, Leafy spurge\*, Prostrate Pigweed, Redroot pigweed, Sow thistle\*.

\*Top growth control only.

#### **Pre-Harvest Intervals**

- Do not permit lactating dairy animals to graze fields within 7 days after application
- Do not harvest forage or cut hay within 30 days after application.
- Withdraw meat animals from treated fields at least 3 days before slaughter.

SPRING WHEAT, BARLEY, RYE: Spray from 4th leaf stage to just before flag leaf (shot blade) stage and when weeds are small. Do not apply before the tiller stage nor from early boot through the milk stage. Do not treat during boot or flowering

stages. Best results will be obtained when soil moisture is adequate for plant growth and weeds are growing well.

FALL WHEAT: Treat in the spring from the time the crop emerges until the flag leaf stage. Do not apply at rates above 1 L/ha.

# Susceptible Weeds:

Small seedlings growing rapidly 725 mL/ha Heavy infestation, older weeds, dry or cold conditions 1.1 L/ha

#### Harder to kill weeds:

Small seedlings growing rapidly 1.25 L/ha Heavy infestation, older weeds, dry or cold conditions 1.75 L/ha. The maximum safe rate is 1.25 L/ha; consider using the higher rates (more than 1.25 L) only if heavy infestations of hard-to-kill weeds are present. The high rate may cause injury. In most cases injury will be offset by the increase in yield due to the reduction in weed competition.

# TANK MIXES: HI-DEP + BANVEL II

Wheat and Barley: Treat from 4th leaf to just before flag leaf stage.

Susceptible weeds: Buckwheat, Canada thistle, Corn Spurry Smartweed, Sow thistle\*.

\*Top growth control only.

Rates: Wheat HI-DEP 600-850 mL/ha + BANVEL II 230-290 mL/ha

Barley HI-DEP 600 mL/ha + BANVEL II 210 mL/ha

#### **CORN**

# POST PLANT APPLICATIONS CROP UP TO 15 CM HIGH

Atrazine resistant Lambsquarters and pigweed: Small seedlings growing rapidly, 725 mL/ha; Heavy infestation, older weeds, dry or cold conditions 1.0 L/ha

If corn plants are between 15 and 20 cm tall and weeds are still in the seedling stage use drop nozzles to keep spray off corn foliage. Do not cultivate until at least 2 weeks after treatment.

#### **Pre-Harvest Intervals**

this information.

- Do not permit lactating dairy animals to graze fields within 7 days after application
- Do not harvest forage or cut hay within 30 days after application.
- Withdraw meat animals from treated fields at least 3 days before slaughter.

# NOTE FOR ALL APPLICATION SCHEDULES: Hybrids vary in tolerance to 2,4-D. Some are easily injured. Spray only hybrids known to be tolerant to 2,4-D. Consult the seed company or your Agricultural Experiment Station or Extension Service Weed Specialist for

FALLOW LAND AND STUBBLE WEED CONTROL. (non-grazing): Annual weeds - use 2 to 3 L/ha. Apply when weeds are actively growing. Perennial weeds - use 4 to 6 L/ha on weeds such as Canada thistle (apply in late bud or early bloom), field bindweed (50% Qr greater bloom) and other perennial weeds listed. Do not make application within 90 days of planting.

TANK MIXTURES FOR FALLOW: HI-DEP can be applied as a tank mixture with BANVEL and ROUNDUP to broaden the spectrum of weed control. In order to assure maximum safety and weed control follow all precautions and limitations on this label and the labels of products used in tank mixtures with HI-DEP.

# **FALLOW**

**Products Rates** 

HI-DEP + BANVEL II 3.25 L/ha + 1 L/ha

HI-DEP + ROUNDUP 1.50 L/ha + .75 L/ha

ESTABLISHED PASTURE AND RANGELAND (without legumes) WEED CONTROL: Annual weeds - use 2 to 3 L/ha. Apply when weeds are actively growing. Perennial weeds - use 3.0-4 L/ha when weeds are translocating carbohydrates, i.e. Canada thistle (late bud to early bloom), bull thistle (bud stage), leafy spurge (4.5 L/ha) (early to late bloom). Field bindweed (80% or greater bloom). Higher rates may cause temporary yellowing of grasses. On pastures and rangeland, apply a maximum of 4.5 L/ha of

product per season. Do not use on bentgrass, alfalfa, clover, or other legumes. Do not use on newly seeded areas until grass is well established. Do not use from early boot to milk stage where grass seed production is desired.

#### **Pre-Harvest Intervals**

- Do not permit lactating dairy animals to graze fields within 7 days after application
- Do not harvest forage or cut hay within 30 days after application.
- Withdraw meat animals from treated fields at least 3 days before slaughter.

TANK MIXTURES FOR RANGELANDS (without legumes): HI-DEP can be applied as a tank mixture with BANVEL to broaden the spectrum of weed control.

To assure maximum safety and weed control, follow all precautions and limitations on this label and the labels of products used in tank mixtures with HI-DEP.

RANGELANDS

Products Rates

HI-DEP and BANVEL II 2 to 4 L/ha + 1 to 2 L/ha

# TURF, LAWNS, PARKS ESTABLISHED FAIRWAYS, GOLF COURSES

Treat in the spring (late May & Early June) and early September for best results. The rate recommended is quite high and will control even harder to kill weeds.

Rate: 2 L/ha, Maximum Application Frequency to Turf

For good turf/lawn management, normally two applications per year per treatment site are adequate. This does not include spot treatments.

# Re-Entry Interval

- Do not allow people (other than applicator) or pets on treatment areas during application.
- Do not enter treated areas until spray has thoroughly dried (or dust has settled for dry product).

# RIGHTS OF WAY AND OTHER AREAS WHERE WOODY PLANT CONTROL IS DESIRED (non-grazing)

Susceptible Trees and Bushes: Basswood, Choke Cherry, Elderberry, Hazelnut, Poplar, Sagebrush, Western Snowberry, Willow.

Rate: 4.5-8 L/ha.

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